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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/515,980	07/06/2005	Hideaki Watanabe	029567-00003	2588

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EXAMINER

PILKINGTON, JAMES

ART UNIT	PAPER NUMBER
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3682

NOTIFICATION DATE	DELIVERY MODE
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02/04/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DCIPDocket@arentfox.com
IPMatters@arentfox.com
Patent_Mail@arentfox.com

Office Action Summary	Application No. 10/515,980	Applicant(s) WATANABE ET AL.	
	Examiner JAMES PILKINGTON	Art Unit 3682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3 and 6-15 is/are pending in the application.
- 4a) Of the above claim(s) 9,11,12,14 and 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,8,10 and 13 is/are rejected.
- 7) ☒ Claim(s) 6 and 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1, 3, 8, and 10, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Asai et al, USP 5,591,093 in view of Strasburg et al, USP 2,198,135 and further in view of Tresselt, EP 0013129.

Asai discloses a torsional damper pulley comprising:

- A hub (10, see Figure 7) fixed at a revolving shaft (passes through the hub) of an internal combustion engine
- An annular pulley body (30) rectangular in section (when a disc is cut down the center the resulting cross section is rectangular) which is coaxially placed outside the hub (10) in its radial direction, having a pulley groove (312) at an outer circumferential portion
- An elastic solid (40) interposed between the outer circumferential surface of the hub (10) and the inner circumferential surface of the pulley body (30)

- The pulley body comprises an annular metallic frame (C2/L5-10, pulley is made of a thin metal plate) having U-shaped in section (see Figure 7 character 30), which has a concave portion (S2) open in an axial direction and has the pulley groove (312) at an outer circumferential portion

Asai does not disclose a predetermined inertial mass comprising an annular inertia mass element fixed in said concave portion, wherein said inertia mass element is comprised of a laminate of annular plates which is formed of contiguous plural arc-shaped ring pieces bonded in a circumferential direction and an axial direction thereof and the plural arc-shaped pieces, each being formed from metal, comprise connecting means for connecting with adjoining plural arc-shaped ring pieces, the connecting means being a part of the ring piece.

Strasburg and Tresselt teach an annular inertia mass element (10/11 of Strasburg, plates in Figure 3 of Tresselt) fixed in a concave portion (both shown in cavities), wherein said inertia mass element is comprised of a laminate of annular plates (both show plates) which is formed by bonding contiguous arc-shaped ring pieces (10/11 of Strasburg) in a circumferential direction (Strasburg Figure 1) and an axial direction (Tresselt Figure 3) thereof and the plural arc-shaped pieces, each being formed from metal (Strasburg, C2/L9 where Strasburg discloses that the weight is metal and C3/L13 where Strasburg discloses the spacer can be metallic), comprise connecting means (end tabs 21 and spacers 22 of Strasburg and concave portions 72 of Tresselt) for connecting with adjoining plural arc-shaped ring pieces, the connecting means being a part of the ring pieces for the purpose of providing a device that has

simple parts and is more efficient in operation (C1/L2-3 Strasburg) and to insure adequate axial concentricity between the discs (Pg 2/L25-27 Tresselt).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the teachings of Asai and an annular inertia mass element fixed in a concave portion, wherein said inertia mass element is comprised of a laminate of annular plates which is formed by bonding contiguous arc-shaped ring pieces in a circumferential direction and an axial direction thereof and the plural arc-shaped pieces, each being formed from metal, comprise connecting means for connecting with adjoining plural arc-shaped ring pieces, the connecting means being a part of the ring pieces, as taught by Strasburg and Tresselt, for the purpose of providing a device that has simple parts and is more efficient in operation and to insure adequate axial concentricity between the discs.

Re clm 3, Strasburg discloses that the connecting means of each ring piece includes a protruding piece (A, see Figure in prior action) formed in one end of the ring piece (B, combination of 10 and 11) and a hole formed in the other end (C) of the ring piece (B), and said ring pieces are bonded in a circumferential direction by close-fitting the protruding piece (A) of one of the ring pieces (B) adjacent in a circumferential direction into the hole of the other one of the adjacent ring pieces.

Re clm 8, Asai in view of Strasburg and Tresselt discloses the annular plate is formed by bonding said ring pieces in a circumferential direction (Strasburg to make rings of Tresselt) and said laminate (stack of rings in Tresselt) is formed by bonding a plurality of annular plates in an axial direction of said plurality of plates.

Re clm 10, Tresselt discloses the annular plate having an outer diameter to be in pressure-contact with an inner surface of an outer circumferential wall for defining the concave portion (s2) of said pulley body (30), and said inertia mass element is fixed by being press-fitted into said concave portion (Page 6 Line 1-12 of Tresselt “the discs are secured together continuously at a radius adjacent the inner border of the working chamber and a radius adjacent the outer border”).

3. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Asai in view of Strasburg and Tresselt and further in view of Critton, USP 4,872,369.

Asai in view of Strasburg and Tresselt discloses all of the claimed subject matter as described above.

Asia in view of Strasburg and Tresselt does not disclose that a resin is filled into the concave portion of said pulley body after the inertia mass is inserted

Critton teaches that a resin (silicone C4/L67) is filled into a concave portion (11) after an inertia mass (12) is inserted into the pulley body (14) for the purpose of providing more dampening to the system (C4/65-C5/L9).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the teachings of Asai in view of Strasburg and Tresselt and provide a resin that is filled into a concave portion after an inertia mass is inserted into the pulley body, as taught by Critton, for the purpose of providing more dampening to the system.

Allowable Subject Matter

4. Claims 6, as well as those depending from (clm 7), are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

5. Applicant's arguments filed 12/10/07 have been fully considered but they are not persuasive.

The Applicant argues that the references do not disclose that the contiguous arc-shaped pieces are not formed of metal. The Applicant relies on a passage from Strasburg that states that the segmental weights are in no metallic contact with each other.

Upon further review of the Strasburg it is found that Strasburg does indeed provide support for the segmental weights being made of metal in C2/L2 and the spacer being made of a metallic spring material (C3/L13). As set forth in the prior office actions the weight and the spacers of Strasburg form the contiguous arc-shaped pieces as claimed and since Strasburg discloses that both components can be metal/metallic Strasburg meets the limitation requiring that the pieces be made of metal.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Pilkington whose telephone number is (571) 272-5052. The examiner can normally be reached on Monday-Friday 8:00AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3682

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. P./

Examiner, Art Unit 3682

1/29/08

/Richard Ridley/

Primary Examiner, Art Unit 3682